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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/716,472

11/20/2003

Hiroshi Akiyama

6863

24956

7590

06/30/2004

MATTINGLY, STANGER & MALUR, P.C.  
1800 DIAGONAL ROAD  
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ALEXANDRIA, VA 22314

EXAMINER

SOUW, BERNARD E

ART UNIT

PAPER NUMBER

2881

DATE MAILED: 06/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/716,472

Applicant(s)

AKIYAMA ET AL.

Examiner

Bernard E Souw

Art Unit

2881

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 November 2003.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 11-18 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 11-18 is/are rejected.  
7) ☒ Claim(s) 16 and 18 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 20 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Preliminary Amendment***

1. The preliminary amendment filed on 11/20/2003 along with the new application has been entered.

Claims 1-10 have been canceled.

New claims 11-18 have been added.

Claims 11-18 are now pending.

### ***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, In Fig. 1 & 7 the electrical *connection to the AC-DC converter 272a from a power source (not shown) over transformer 271*, as recited in the specification on pg.21-22, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 16 and 18 recite the limitation "PWM scheme". There is insufficient antecedent basis for this limitation in the claim. The acronym "PWM" is not previously defined, neither in the parent/preceding claim(s), nor in the specification.

***Obviousness Type Double Patenting  
No Secondary Reference(s)***

*The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).*

*A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).*

*Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).*

4. Claims 11-18 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-5 and 11-13 of now allowed U.S. Patent Application No. 09/623,040, but not yet issued to one of the present Applicants. Although the conflicting claims are not identical, they are not patentably distinct from each other because:

► The limitations of claims 11 and 12 are the same as the combined limitations of claim 1 (regarding filter) and claim 2 (regarding control device) of the allowed parent application SN 09/623,040.

- ▶ The limitations of claims 13 and 14 are the same as the combined limitations of claim 2 (regarding control device) and claim 4 (regarding inverter) of the allowed parent application SN 09/623,040.
- ▶ The limitations of claim 15 are the same as the combined limitations of claim 3 (regarding 1<sup>st</sup> control device and 1<sup>st</sup> inverter) and claim 4 (regarding 2<sup>nd</sup> control device and 2<sup>nd</sup> inverter) of the allowed parent application SN 09/623,040.
- ▶ The limitations of claim 16 are the same as the combined limitations of claim 11 (regarding a 1<sup>st</sup> control device, 1<sup>st</sup> inverter and 1<sup>st</sup> PWM) and claim 12 (regarding a 2<sup>nd</sup> control device, 2<sup>nd</sup> inverter and 2<sup>nd</sup> PWM) of the allowed parent application SN 09/623,040.
- ▶ The limitations of claim 17 are the same as the combined limitations of claim 2 (regarding a 1<sup>st</sup> electromagnet and a change from 1<sup>st</sup> radiation area to 2<sup>nd</sup> radiation area) and claim 13 (regarding a 2<sup>nd</sup> electromagnet and a change from 3<sup>rd</sup> radiation area to 4<sup>th</sup> radiation area) of the allowed parent application SN 09/623,040.
- ▶ The limitations of claim 18 are the same as the combined limitations of claim 2, claim 11, claim 12 and 13 of the allowed parent application SN 09/623,040.

#### ***ALLOWABLE SUBJECT MATTER***

5. Claims 11-18 contain the same allowable subject matter as the previously allowed parent application SN 09/623,040, and hence, would be also allowed, pending on an appropriate amendment of Fig.1 and Fig.7 (see allowed parent application), and the submission of a Terminal Disclaimer. Although the present application is claiming

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priority to the parent application SN 09/623,040 (which has been allowed but not yet issued), and hence, if allowed, would have the same patent lifetime, a Terminal Disclaimer is still required with regard to other legal consequences.

### ***Communications***


6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bernard E Souw whose telephone number is 571 272 2482. The examiner can normally be reached on Monday thru Friday, 9:00 am to 5:00 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R Lee can be reached on 571 272 2477. The central fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306 for regular communications as well as for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0956.

bes

June 19, 2004

  
JOHN R. LEE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800